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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,681	08/25/2003	Danny F. Ammar	28244-CON	2905
7590 05/10/2004				
RICHARD K. WARTHER Allen, Dyer, Doppelt, Milbrath & Gilchrist, P.A. P.O. Box 3791 Orlando, FL 32802-3791			EXAMINER HARVEY, JAMES R	
			ART UNIT 2833	PAPER NUMBER

DATE MAILED: 05/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/647,681	<b>Applicant(s)</b> AMMAR ET AL.	
	<b>Examiner</b> James R. Harvey	<b>Art Unit</b> 2833	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37.CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on preliminary amendment of 8-26-03.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 21-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>8-26-03</u> | 6) <input type="checkbox"/> Other: _____  |

***DETAILED ACTION***

***Claim Cancellations***

- The cancellation of claims 1-20 has been made of record.

***Continuation Application Under 37 CFR 1.53(b)***

- It is noted that this is a continuation of Application 10/224,622 that was filed on 8-20-02.

***Information Disclosure Statement***

- The Information Disclosure statement(s) and related documents that were filed on 8-26-03 have been considered.

***Drawings***

- The drawings are objected to because the cross-hatching is improper. See MPEP 608.02.

For example, portions of the drawings in section and made of an insulated material must be crosshatched with alternating thick and thin lines, not with just thin lines.

- The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims.
  - In reference to Claim(s) 25, the recitation “connectors additional to the connector that transfers RF signals” is not shown in the drawings. The recitation is seen to mean that there are different connectors and no different connectors are shown.
  - The above feature(s) must be shown or the feature canceled from the claim. No new matter should be entered.

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- Please note that drawing corrections will no longer be held in abeyance. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application.
- If drawing correction are not submitted with the response to this office action, the response will be consider a Non-Responsive Reply and the following paragraph will apply:

The reply filed on ( ... ) is not fully responsive to the prior Office Action because: (...)  
Since the period for reply set forth in the prior Office action has expired, this application will become abandoned unless applicant corrects the deficiency and obtains an extension of time under 37 CFR 1.136(a).

The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. In no case may an applicant reply outside the SIX (6) MONTH statutory period or obtain an extension for more than FIVE (5) MONTHS beyond the date for reply set forth in an Office action. A fully responsive reply must be timely filed to avoid abandonment of this application.

### *Claim Objections*

- Claim(s) 22, 25, 26, and 35 is/are objected to because of the following informalities:
  - In reference to Claim(s) 21-40, applicant has used the term connectors in such a broad manner as to make it unclear if applicant's "connector" is the housing that holds the metal pins or the metal pins that connect the signals between the printed circuit boards. For purposes of examination, it is assumed that the language is intended to mean the metal pins. An examination based on the merits, as best understood, is addressed below.
  - In reference to Claim(s) 22, 26, and 35, the recitation "either side" is vague and indefinite. It is not clear if applicant is seeking patent protection for a connector on both the left and right side or if applicant is seeking patent protection on either one side or the other side. For purposes of

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examination, it is assumed that the language is intended to require only one side. An examination based on the merits, as best understood, is addressed below.

-- In reference to Claim(s) 25, the recitation "connectors additional to the connector that transfers RF signals" is vague and indefinite. The recitation is seen to mean that there are different connectors and no different connectors are shown in the drawings. For purposes of examination, it is assumed that the language is intended to mean "a plurality of connector" instead of ~~connectors additional~~.

-- Appropriate response to the above is required.

***Claim Rejections - 35 USC § 102***

- The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**\*\* Claim(s) 21-25 and 27-40 are rejected under 35 U.S.C. 102(b) as being anticipated by Hughes et al. (6077130).**

-- In reference to Independent Claim(s) 21, Hughes shows (figure 2 ) an apparatus used in the steps of positioning a housing member 4 having a connector 26 with opposing ends against the first printed circuit board 18 such that one end of the connector engages a circuit on the first printed circuit board;

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biasing another end of the connector into connection with a circuit of a second printed circuit board 20; and

can be used for the functional recitation of transferring RF signals between the boards via the connector.

-- In reference to Independent Claim(s) 30, Hughes shows (cover sheet) providing a connector 26 between two boards (18,20), without use of connecting wires between the boards; and

can be used for the functional recitation of transferring RF signals between the boards via the connector 26.

-- In reference to Independent Claim(s) 36, Hughes shows a housing member 4 having a connector 26 with opposing ends that is positioned against the first printed circuit board 18 such that one end of the connector engages a circuit on the first printed circuit board 18 and another end of the connector is biased into connection with a circuit of the second printed circuit board 20 (figure 5 ) and shows the same claimed structure and can complete the functional recitation of transferring RF signals via the connector 26 between the first and second printed circuit boards.

-- In reference to Claim(s) 22 and 35, Hughes shows (figure 2 ) shows the same claimed structure and can complete the functional recitation of transferring ground signals using connectors 24 positioned on either side of the connector 26 that shows the same claimed structure and can complete the functional recitation of transfers RF signals.

-- In reference to Claim(s) 23, Hughes shows (cover sheet) the step of soldering the end 36 of the connector engaging the first printed circuit board 18.

-- In reference to Claim(s) 24, Hughes shows (cover sheet) the connector is solderless on at least one end 62.

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-- In reference to Claim(s) 25, Hughes shows (cover sheet) the same claimed structure and can complete the functional recitation of transferring DC signals (from battery 16 (figure 4) using connectors 24 additional to the connector 26 that transfers RF signals.

-- In reference to Claim(s) 27, Hughes shows (cover sheet) the same claimed structure and can complete the functional recitation of transferring RF signals at no less than 4 GHz.

-- In reference to Claim(s) 28, Hughes shows (cover sheet) a Surface mount pressure Contact 62 (figure 5).

-- In reference to Claim(s) 29, Hughes shows (cover sheet) the same claimed structure and can complete the functional recitation of mixing the RF signals with a carrier frequency.

-- In reference to Claim(s) 30, it is addressed above.

-- In reference to Claim(s) 31, Hughes shows (cover sheet) the same claimed structure and can complete the functional recitation of transferring the RF signals at no less than 4 GHz.

-- In reference to Claim(s) 32, Hughes shows (cover sheet) the connector 26 is solder-less on at least one end 60.

-- In reference to Claim(s) 33, Hughes shows the connector 26 has a Surface mount contact 36.

-- In reference to Claim(s) 34, Hughes shows the same claimed structure and can complete the functional recitation of mixing the RF signals with a carrier frequency and/or other RF processing signals that add functionality.

-- In reference to Claim(s) 35, it is addressed with claim 22 above.

-- In reference to Claim(s) 36, it is addressed above.

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- In reference to Claim(s) 37, Hughes shows the same claimed structure and can complete the functional recitation of transferring the RF signals at frequencies no less than 4 GHz with very low losses.
- In reference to Claim(s) 38, Hughes shows (cover sheet) the connector 26 is solder-less on at least one end 36.
- In reference to Claim(s) 39, Hughes shows (cover sheet) a surface mount pressure contact 62.
- In reference to Claim(s) 40, Hughes shows the same claimed structure and can complete the functional recitation of mixing RF signals with a carrier frequency and/or RF processing signals.

***Claim Rejections - 35 USC § 103***

- The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**\*\* Claim(s) 26 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over Hughes et al.**

- In reference to Claim(s) 26, Hughes shows (cover sheet) the same claimed structure and can complete the functional recitation of transferring ground signals using connectors 24 positioned on either side of the connector 26 that transfers RF signals.



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However, Hughes does not show the function of positioning a plurality of housing members adjacent each other.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to duplicate the housing 4 of Hughes into a plurality of housings, since it has been held that the mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8 and it would have been obvious to one having ordinary skill in the art at the time the invention was made to rearrange the plurality of housings and place them adjacent each other, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70. One skilled in the art would be motivated to duplicate the parts to increase the amount of DC current the assembly of housings could distribute thus allowing the housing assembly to be used in a high current load application. One skilled in the art would be motivated to rearrange the housing adjacent each other to reduce the overall size of the assembly thus reducing the weight or amount of and associated cost of insulating plastic material for the assembly that the housing is placed within.

### *Conclusion*

Effective May 1, 2003, the United States Patent and Trademark Office has a new Commissioner for Patents address. Correspondence in patent related matters must now be addressed to:

**Commissioner for Patents**

**P. O. Box 1450**

**Alexandria, VA 22313-1450**

For additional information regarding the new address, see Correspondence with the United States Patent and Trademark Office, 68 Fed. Reg. 14332 (March 25, 2003).

- The prior art listed on PTO form 892 that is made of record and not relied upon is considered pertinent to applicant's disclosure because it shows the state of the art with respect to applicant's claimed invention. In particular reference to Krafthefer, figures 2 and 6 show that it is common in the art to either solder the tail to the printed circuit board or to use a conductor that can be used to go from the tail to a printed circuit board.

- Any inquiry concerning this communication or earlier communications from the examiner should be directed to James R. Harvey whose telephone number is 703-305-0958. The examiner can normally be reached on 8:00 A.M. To 5:00 P.M.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on 571-272-2800 extension 33.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2800.

- Effective **October 1, 2003**, all patent application related correspondence transmitted by facsimile must be directed to the central facsimile number, **(703) 872-9306**, with a few exceptions. *See Fax Automation in Technology Center 1700, 1237 Off. Gaz. Pat. Office* 140 (August 29, 2000). Replies to Office actions including after-final amendments that are transmitted by facsimile must be directed to the central facsimile number. Unofficial correspondence such as draft proposed amendments for interviews may continue to be transmitted by facsimile to the Technology Centers

James R. Harvey, Examiner

jrh  
May 3, 2004

  
**THOD D. TA**  
**PRIMARY EXAMINER**